

THE IOWA TESTS · THE IOWA TESTS · THE IOWA TESTS · THE IOWA TESTS

The Iowa Tests®

A COMPONENT OF THE



COMPREHENSIVE  
ASSESSMENT SYSTEM  
MontCAS, PHASE 1

INTERPRETIVE GUIDE  
PRINTED IN SPRING 2005

THE IOWA TESTS · THE IOWA TESTS · THE IOWA TESTS · THE IOWA TESTS



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# Interpretive Guide

## Introduction

The Montana Statewide Norm-Referenced Testing (NRT) Program was established as Phase 1 of the Montana Comprehensive Assessment System (MontCAS). The primary purpose of testing is to provide parents, students, educators, and policymakers with normative data that may be used for evaluating student, school, and district performance. Test results are to be utilized by teachers and administrators to plan instructional programs that enhance educational opportunities for Montana students.

All eligible students in grades 4 and 8 take the Complete Batteries of the *Iowa Tests of Basic Skills®* (*ITBS®*) Form A. All eligible students in grade 11 take the Complete Battery of the *Iowa Tests of Educational Development®* (*ITED®*) Form A. The Iowa Tests are published by Riverside Publishing of Itasca, Illinois, and are in the traditional multiple-choice format.

This *Interpretive Guide* is designed to help you understand, explain, and use the results of Phase 1 of the MontCAS. In the Montana program, students' scores are reported by test and skill area at the individual student level and then aggregated to class/school, district, and state levels.

This guide specifies the tests used for the Montana program and describes the scores on the various reports so that proper interpretations can be made. It also discusses the various individual, school, and district reports. Test results are one of several sources that provide teachers with an overall understanding of a student's educational development.

## The Tests

The Iowa Tests are a standardized achievement test battery. A standardized, norm-referenced test is a test that has been given, using specified directions and under specific conditions, to a group of students that was carefully selected to be representative of students nationwide. Scores derived from this "standardization" program are the norms that permit the test user to compare student performance with that of this larger, representative group. Thus, the norms provide a method for comparing the achievement of specific groups of students in the same grade. Norms also provide a vehicle for comparing the performance of individual students with the performance of students in the national norm group.

The Montana Statewide NRT scores are reported in terms of 2000 norms. Montana students took The Iowa Tests in March and April, one to four weeks outside of the empirical norms period; therefore, norms are interpolated to the week of April 1. This is the middle week of the testing cycle.

In the Montana program, the Complete Batteries of the *ITBS* and the *ITED* Form A are administered at the following grades and levels. Levels, in general, correspond to a student's chronological age.

### Grade Levels and Test Levels

Grade	4	8	11
Level	10	14	17/18

Achievement for the *ITBS* and *ITED* is measured and reported as listed below. Total and Composite scores are obtained by averaging the scores from

certain tests. The listing shows which scores are included in the various averages.

<b>ITBS Areas Tested</b>	<b>Reporting Test Results</b>		
<b>Reading</b> Vocabulary V Reading Comprehension RC	Reading Total (RT) = $\frac{V+RC}{2}$		
<b>Language</b> Spelling L1 Capitalization L2 Punctuation L3 Usage and Expression L4	Language Total (LT) = $\frac{L1+L2+L3+L4}{4}$		<b>Core Total</b> = $\frac{RT+LT+MT}{3}$
<b>Mathematics</b> Math Concepts/Estimation M1 Math Problem Solving/ Data Interpretation M2 Math Computation M3	Math Total (MT) = $\frac{M1+M2+M3}{3}$		
<b>Social Studies</b> SS	SS		
<b>Science</b> SC	SC		
<b>Sources of Information</b> Maps and Diagrams S1 Reference Materials S2	Sources of Information Total (ST) = $\frac{S1+S2}{2}$		<b>Composite</b> = $\frac{RT+LT+MT+SS+SC+ST}{6}$

<b>ITED Areas Tested</b>	<b>Reporting Test Results</b>		
<b>Reading</b> Vocabulary V Reading Comprehension RC	Reading Total (RT) = $\frac{V + RC}{2}$		
<b>Language: Revising Written Materials</b> L	L		<b>Core Total</b> = $\frac{RT + L + MT}{3}$
<b>Spelling</b> SP	SP		
<b>Mathematics</b> Math Concepts/Problem Solving M Math Computation Comp	Math Total (MT) = $\frac{2(M) + Comp}{3}$		
<b>Social Studies</b> SS	SS		
<b>Science</b> SC	SC		
<b>Sources of Information</b> SI	SI		<b>Composite</b> = $\frac{RT+L+MT+SS+SC+SI}{6}$

A student must mark a minimum number of items on each Complete Battery test or test part before that part is considered “attempted” and the student’s scores are reported. The minimum varies by test. If a student does not meet the minimum completion criteria for a test, the student receives no scores for that test, no Total score for that content area, and no Core Total or Composite scores.

## **Norm-Referenced Test Scores**

Scores from a norm-referenced test indicate how a given student’s knowledge or skill compares with that of others in the norm group. They do not tell what a student knows or does not know.

The scores reported for the MontCAS, Phase 1 identify a student’s relative strengths and weaknesses in the tested areas. Scores can be used to monitor year-to-year growth of students and groups of students in important academic areas.

The following scores are reported for the Montana program:

- Standard score (SS)
- National percentile rank (NPR)
- National stanine (NS)
- Normal curve equivalent (NCE)

The scores differ from one another in the kind of information they represent, the precision with which they describe achievement, and the purposes they can serve.

### **Standard Score**

*Definition.* Standard scores (SSs) are produced from a single, equal-interval scale of scores that is continuous from kindergarten through grade 12. Standard scores on The Iowa Tests range from 80 for kindergarten through 400 for grade 12. The range of possible standard scores is different for each grade level.

*Uses.* The major use of the standard score is to measure achievement growth of students or groups of students from year to year. Within a school or district, successively higher standard scores from grade to grade would be expected.

*Limitations.* A standard score by itself has little meaning. It can be interpreted only when it is compared with some referent, such as the appropriate average standard score, as shown in the table below. The numbers indicate the standard scores that correspond to typical performance of grade groups on The Iowa Tests during the norming period in the spring of the year. For example, an eighth-grader’s score of 250 on the *ITBS* Language Total means that the student’s language performance corresponds to the median SS of the typical eighth-grade student during the same norming period.

### **Median SS for Complete Composite with Computation\* (Quartermonth of April 1, 2000)**

Grade	2	3	4	5	6	7	8
Median SS	167	184	200	214	227	239	250

Grade	9	10	11	12
Median SS	259	267	273	278

\* Updated February 2005

The scale above shows that average annual growth decreases as students move up from one grade to the next. For example, at the median, the average growth from grade 4 to grade 5 is 14 standard-score points, but from grade 11 to grade 12 the average growth is only 5 points. Since it is widely believed that the rate of growth in most achievement areas decreases as grade level increases, the standard score scale reflects typical student development.

### **National Percentile Rank**

*Definition.* A student’s percentile rank (PR) shows the student’s relative position or rank in a group of students who are in the same grade and who took the tests at the same time of year as the student. A student’s national percentile rank (NPR) is the student’s standing as compared to a large, representative sample of students in the same grade from the entire nation.

*Uses.* The percentile rank, reported in units that range from 1 to 99, is perhaps the most useful and readily understood score for interpreting student achievement. It describes performance in small, fairly precise units. These units clearly state

performance relative to the norm group. For example, if Kara earned a percentile rank score of 72 on the Vocabulary test, it means that she scored the same as or higher than 72 percent of the students in the norm group who were in the same grade and took the same test. It also means that 28 percent of the students scored higher than Kara.

*Limitations.* The percentile rank magnifies small differences in the middle raw scores while reducing differences in very high and very low raw scores. This is because the percentile rank is based on the frequency with which each raw score occurred in the norm group and denotes the percentage of individual scores that fell at or below a selected point.

Generally, very high and very low scores are infrequent while middle scores are frequent. Smaller differences in raw score points are therefore needed to move from one percentile rank to another for middle scores, while greater differences in raw score points are needed to move from one percentile rank to another for very high or very low scores. For example, a difference of only three raw score points might be necessary to move from a percentile rank of 50 to a percentile rank of 55, while a difference of seven raw score points might be necessary to move from a percentile rank of 10 to a percentile rank of 15, or from 90 to 95.

### National Stanine

*Definition.* Stanines express test results in nine equal steps ranging from 1 (lowest) to 9 (highest). The average stanine is a score of 5. Stanines, which are similar to percentile ranks, are relatively easy to use because they are all one-digit numbers. The national stanine (NS) shows a student's standing within the group of students in the same grade who took the test at the same time of year during the national standardization.

Montana has arranged the nine stanines into four performance categories of novice, nearing proficiency, proficient, and advanced.

Stanines 1–3	Novice
Stanine 4	Nearing Proficiency
Stanines 5–7	Proficient
Stanines 8–9	Advanced

*Uses.* Stanines for groups are useful for broadly identifying areas of curricular strengths and weaknesses that might be represented by a set of test scores. A class average of 4 for Reading Total, for example, shows that the class as a whole is reading slightly below average. A visual display of nine stair steps can be a helpful interpretive aid during parent conferences or in classroom score interpretation sessions with students.

*Limitations.* Stanines are less precise than percentile rank scores. For example, percentile ranks of 24 and 40 both represent a stanine of 4. However, PRs of 23 and 24 are consecutive PRs that represent stanines of 3 and 4, respectively.

### Normal Curve Equivalent

*Definition.* Normal curve equivalents (NCEs), derived from national percentile ranks, are normalized standard scores with a mean of 50. NCEs are equal-interval scores that result from dividing the normal curve into 99 equal units. This assures that the differences between NCE units at different positions on the scale are equal, unlike percentile ranks. For example, the difference in performance between NCEs of 50 and 55 is equal to the difference between NCEs of 10 and 15.

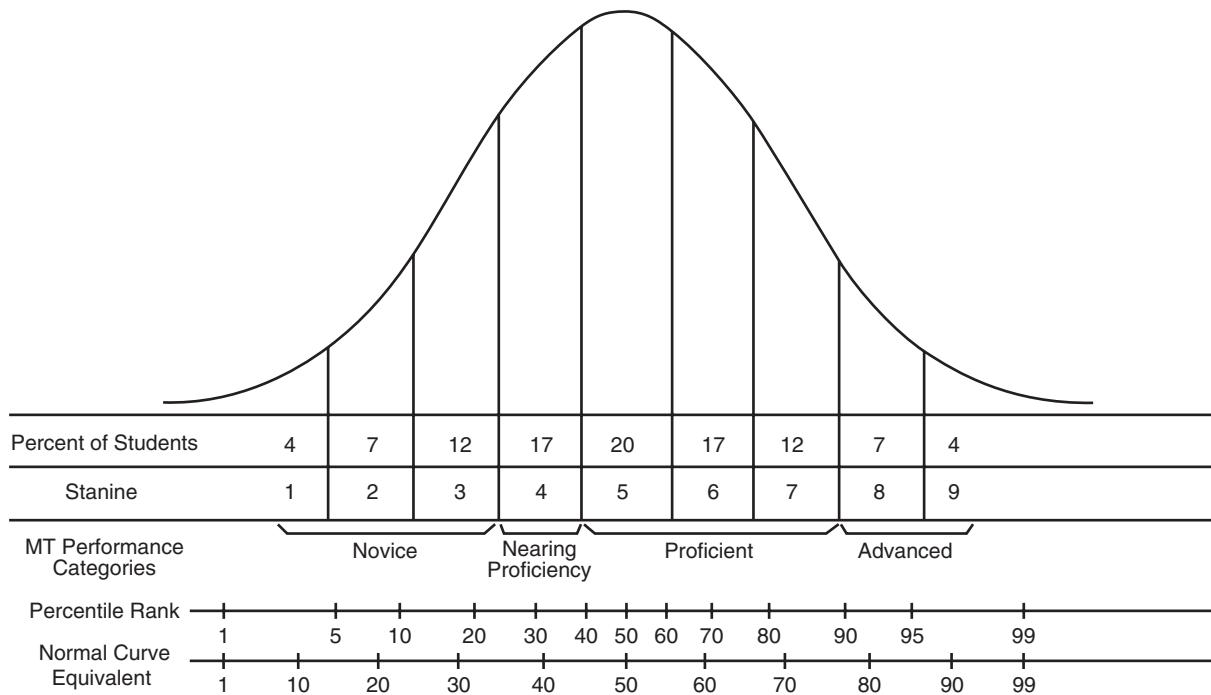
The NCE is a *within-grade* standard score that denotes individual or group status within a grade. The full range of NCEs, 1 through 99, may be earned in each grade level with the average NCE always at 50. By contrast, the standard score described on page 3 is an *across-grade* score that can be used to determine growth. Unlike NCEs, the range of possible standard scores is different for each grade level and the average standard score increases as the grade levels move upward.

*Uses.* NCEs can be interpreted in much the same way as percentile ranks. NCEs may be averaged to describe group performance. For these reasons, NCEs are often used in evaluating results in Title I programs. NCEs used in Title I evaluation must be based on established norms for a particular grade and time of year. This requirement enhances the standardization and comparability of test reporting procedures.

NCEs can be averaged for most groups because of their equal-interval scaling. In this way they are unlike percentile ranks, which cannot be averaged because of their frequency-based scaling. NCEs may be thought of as roughly equivalent to stanines to one decimal place. For example, an NCE of .53 may be interpreted as a stanine of 5.3.

*Limitations.* Although reporting procedures for various test batteries have been standardized, the NCEs from different test batteries are not interchangeable.

### Relationship of Stanines, Percentile Ranks, and Normal Curve Equivalents



## Comparison of NRT Scores

NRT Scores	Definition	Score Range	Characteristics	Uses	Example	Limitations
Standard Score (SS)	Equal-interval scale of scores that is continuous from kindergarten to grade 12.	80–400	<ul style="list-style-type: none"> <li>Shows year-to-year growth.</li> <li>Median SS for each grade reflects typical student performance in that grade.</li> </ul>	To measure achievement growth from year to year.	Sam is in eighth grade. His Language Total SS of 250 means that his language performance is like that of the typical eighth-grade student in April.	For interpretation of the SS, a benchmark value associated with typical performance in each grade is needed.
National Percentile Rank (NPR)	Percent of students in the national norm group who earned raw scores the same as or lower than a particular raw score.	1–99	<ul style="list-style-type: none"> <li>Shows a student's relative positioning in a group of students in the same grade tested at the same time of year.</li> <li>Frequency-based scale.</li> </ul>	<ul style="list-style-type: none"> <li>To describe student performance in small, fairly precise units relative to the norm group.</li> <li>To describe areas of relative strength and weakness for an individual student, class, or grade group.</li> </ul>	Lisa's NPR of 43 for Social Studies means that 43 percent of the national norm group scored at or below Lisa's raw score, and 57 percent scored higher.	NPRs cannot be averaged. Group averages must be reported in terms of other scores, such as the NPR of the average SS.
National Stanine (NS)	A grouping of percentile ranks. Montana has arranged the stanines into four performance categories.	1–9	<ul style="list-style-type: none"> <li>Montana's Performance Categories 1–3 Novice 4 Nearing Proficiency 5–7 Proficient 8–9 Advanced</li> <li>Equal-interval scale.</li> </ul>	To broadly identify areas of strength and weakness.	Lara's stanine of 3 for Reading Total means that she is in the novice stanine group.	Less precise than percentile ranks.
Normal Curve Equivalent (NCE)	Equal-interval scores that result from dividing the normal curve into 99 equal units.	1–99	<ul style="list-style-type: none"> <li>Equal-interval score.</li> <li>Scores can be added, subtracted, and averaged.</li> </ul>	<ul style="list-style-type: none"> <li>To compare tests in terms of strengths and weaknesses.</li> <li>To compare groups of students.</li> </ul>	If Tanya's Reading Total NCE is 46 and her Math Total is 58, you can say that she has a relative weakness in reading and a relative strength in math.	NCEs from different test batteries (e.g., the <i>SAT 9</i> and the <i>ITBS</i> ) cannot be interchanged.
Raw Score (RS)	Number of test questions student answered correctly.	Number of items varies per test.	Can be used to calculate percent-correct.	Can be converted to other scores.	If Jesse's raw score on a 40-item test is 30, he answered 30 of the 40 items correctly.	Meaning varies from test to test.

## The Reports

The following reports will be mailed by Riverside Publishing to system test coordinators: Student Score Label for the student's cumulative record folder; List of Student Scores and Group Summary of Class, School, and System Averages; Individual Performance Profile; Student Profile Narrative (parent report); Individual, Class, School, and System Customized Skills; and School and System Group Narrative Reports.

System-level customized reports will be mailed by Riverside Publishing to system test coordinators later than the other reports because the information is dependent upon the calculation of state results.

Students that were administered the Braille version of The Iowa Tests will receive a Student Score Label, a Student Profile Narrative, and be included in the List of Student Scores. In the previous years, these reports were not available for students taking the Braille version.

Samples are presented on the following pages. Each sample report includes lettered callouts that are referenced in the interpretive information provided with the sample. The reports are located as follows:

Report	Page
Student Score Labels .....	8
List of Student Scores .....	10
Group Summary of Student Scores .....	10
Individual Performance Profile .....	12
Student Profile Narrative (Parent Report) .....	14
Individual and Group Customized Skills .....	16
Group Narrative Summary .....	18



# STUDENT SCORE LABELS

*Iowa Tests of Basic Skills® (ITBS®)*  
A Component of MontCAS

Form/Level: A/10  
Test Date: 04/2005  
Norms: 04/01/2000  
Order No.: 002-A7000028-0-002  
Page: 1 Grade: 4

<b>A</b>		ID Number: 0000141452 09/93	DOB: 04/05	Grade: 4	Level: A	Form: 10	Test Date: 04/05
READING				LANGUAGE		Norms 04/01	
Scores Reported	Vocab- ulary	TOTAL		Spelling	Capital- ization	Usage/ Express.	Concens/ Estimate
SS	204	188	196	196	214	215	182
NS	7	5	6	7	7	5	6
NCE	70	54	61	69	72	69	59
NPR	83	58	70	82	85	84	66

<b>B</b>		ID Number: 0000142469 11/87	DOB: 04/05	Grade: 11	Level: A	Form: 17/18	Test Date: 04/05
READING				LANGUAGE		Norms 04/01	
Scores Reported	Vocab- ulary	TOTAL		Spelling	Revising Writing	Concens & Prob. Solv.	Compu- tation
SS	325	340	332	349	323	268	273
NS	9	8	9	8	7	5	5
NCE	87	84	87	77	75	50	50
NPR	96	95	96	90	88	54	54



# STUDENT SCORE LABELS

*Iowa Tests of Educational Development® (ITED®)*  
A Component of MontCAS

Form/Level: A/10  
Test Date: 04/2005  
Norms: 04/01/2000  
Order No.: 002-A7000028-0-002  
Page: 1 Grade: 4

<b>A</b>		ID Number: 0000142469	DOB: 11/87	Grade: 11	Level: A	Form: 17/18	Test Date: 04/05
READING				LANGUAGE		Norms 04/01	
Scores Reported	Vocab- ulary	TOTAL		Spelling	Revising Writing	Concens & Prob. Solv.	Compu- tation
SS	325	340	332	349	323	268	273
NS	9	8	9	8	7	5	5
NCE	87	84	87	77	75	50	50
NPR	96	95	96	90	88	54	54

<b>B</b>		ID Number: 0000142469	DOB: 11/87	Grade: 11	Level: A	Form: 17/18	Test Date: 04/05
READING				LANGUAGE		Norms 04/01	
Scores Reported	Vocab- ulary	TOTAL		Spelling	Revising Writing	Concens & Prob. Solv.	Compu- tation
SS	325	340	332	349	323	268	273
NS	9	8	9	8	7	5	5
NCE	87	84	87	77	75	50	50
NPR	96	95	96	90	88	54	54

*Sample reports are for illustration only and should not be interpreted.*

## Student Score Labels

One adhesive student label is provided for each answer document that was received. This label can be easily affixed to the student's cumulative record folder. It contains the student information described below. The same information is reported on the List of Student Scores.

- Ⓐ Across the top of the student score labels are student name, ID number, date of birth, grade, test level and form, test date, and norms information.
- Ⓑ F-1, F-2, F-3  
If your district elected to do additional coding, the codes will be printed here. *CogAT® Standard Age Scores* would be printed here if coded.

**Code = Vocational Education Concentrator**  
(for grade 11 students only)

A = Agriculture

B = Business

C = Marketing

D = Health Occupations

E = Family & Consumer Science

F = Technology

G = Trades & Industries

H = A blend of courses in two or more of the above  
  
A = Absent

“1” if Absent

**G-K = Alternate Assessment Scale Scores**

**Z = Exclusions**

“0” for Braille

“1” for Alternate Assessment

“8” for Foreign Exchange Students

“9” for Not enrolled in an accredited MT school

## Programs

<b>SE</b>	Special Education student, identified as being disabled, who has an IEP.
504	Student identified as 504, who has a 504 Plan.
<b>F/R/L</b>	Student who is eligible for free or reduced-price lunch participation. Due to the confidential nature of this designation, the <i>TBS/TED</i> answer document must be coded by: (a) a district or school building test coordinator (i.e., test coordinator), OR (b) the local school district official who determines free and reduced-price eligibility (i.e., school food official).
	If the coding is to be done by a test coordinator, then the school food official will provide a list of free and reduced-price eligible students to the test coordinator. Upon completion of the coding, the test coordinator must return the list to the school food official. If the coding is to be done by the school food official, then the test coordinator will give the <i>TBS/TED</i> answer documents to the school food official. Upon completion of the coding, the school food official is to return the answer documents to the test coordinator.
<b>GT</b>	Gifted students identified and served.
<b>ELL</b>	Student identified as limited English proficient. Montana observes the federal definition of limited English proficiency. Both language impact and academic achievement must be considered.
<b>MG</b>	Student who has migrant status. A student is designated “migrant” and considered eligible for services under the Title I Part C statute if he or she meets very specific conditions extracted from the law.
<b>TIL</b>	<b>Local option</b>
<b>TIM</b>	<b>Local option</b>
<b>Other 1 (01)</b>	Student has not been enrolled in the school for the entire year (entered on or before the official Fall Enrollment Count and continues through the first day of testing).
<b>Other 2 (02)</b>	Student has not been enrolled in the district for the entire year (entered on or before the official Fall Enrollment Count and continues through the first day of testing).

- Ⓒ Scores reported are standard score (SS), national stanine (NS), normal curve equivalent (NCE), and national percentile rank (NPR).



## LIST OF STUDENT SCORES

*Iowa Tests of Basic Skills® (ITBS®)*  
A Component of MontCAS

A

Class: Clark  
School: Central Elementary  
System: Spring Lake  
State: Montana

Form/Level: A/10  
Test Date: 04/20/05  
Norms: 04/01/2000  
Order No.: 002-A7000028-0-002  
Page: 1 Grade: 4

STUDENT NAME	Birth Date	Level (Gender)	READING			LANGUAGE			MATHEMATICS			CORE STUDIES			SOURCES OF INFO.			COM- POSITE					
			Vocab- ulary	Compre- hension	Form	Spelling	Capital- ization	Punc- tuation	Usage/ Express.	Total	Concepts/ Estimate	Problems/ Interp.	Computa- tion	Total	Social Sci- ence	Maps/ Diagrams	Materials	Total					
Anderson, Jamie	09/93	10-06	10 (F)	SS	204	188	196	196	214	196	215	206	182	193	172	182	197	179	186	204	228	216	195
	000014452	O1	A	NS	70	54	61	69	72	61	71	69	49	59	37	55	46	52	55	68	93	80	66
Brentwood, Alicia	03/94	10-00	10 (F)	SS	10	A	NS	NCE	NPR	NS	NS	NS	NS	NS	73	54	54	54	54	81	98	92	
	0000157073	SE	25 16 12 13 19																				
Carter, James	11/93	10-04	10 (M)	SS	152	147	150	152	155	181	146	158	146	#	159	150	165	150	157	163	163	160	
	0000146255	O2	A	NS	20	12	15	16	15	5	2	3	2	1	2	3	2	3	2	3	3	3	
Eastwood, Olga	11/94	10-04	10 (F)	SS	157	157	150	150	178	154	142	158	158	169	168	164	160	159	139	151	181	166	157
	0000175431	A	NS	NCE	3	25	23	23	5	2	2	2	2	2	3	3	3	3	1	2	5	3	
Fleming, Leticia	07/94	9-08	10 (F)	SS	157	157	150	150	178	154	142	158	158	169	168	164	160	160	139	151	181	166	157
	0000143186	A	NS	NCE	11	12	10	10	42	10	4	10	10	10	10	10	10	10	10	10	10	10	
	1																						

# Too few items attempted

## CLASS SUMMARY

*Iowa Tests of Basic Skills® (ITBS®)*  
A Component of MontCAS



D

Class: Clark  
School: Central Elementary  
System: Spring Lake  
State: Montana

Form/Level: A/10  
Test Date: 04/20/05  
Norms: 04/01/2000  
Order No.: 002-A7000028-0-002  
Page: 1 Grade: 4

CLARK	READING			LANGUAGE			MATHEMATICS			CORE STUDIES			SOURCES OF INFO.			COM- POSITE
	Vocab- ulary	Compre- hension	Total	Spelling	Capital- ization	Punc- tuation	Usage/ Express.	Total	Concepts/ Estimate	Problems/ Interp.	Computa- tion	Total	Social Sci- ence	Maps/ Diagrams	Materials	Total
Number of Students Included	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Average Standard Score (SS)	204.3	188.2	196.3	240.2	214.3	196.2	215.1	206.4	182.1	189.3	172.0	188.2	196.7	178.6	186.5	194.3
National Stanine of Average SS	70.7	54.1	61.1	69.2	72.7	61.0	71.2	69.2	49.1	59.1	47.4	55.2	63.1	46.1	52.0	54.7
Normal Curve Equivalent of Average SS	70.0	54.5	61.5	69.8	72.8	61.8	70.8	68.8	49.8	66.6	27	59.9	73.0	48.4	56.4	59.9
Percentile Rank of Average SS; Nat'l Student Norms	83	58	70	83	85	70	84	82	49	86	27	59.9	73.0	48.4	56.4	59.9
Number of Students Tested = 25																

Sample reports are for illustration only and should not be interpreted.

## List of Student Scores

The List of Student Scores lists students alphabetically with their scores for each content area. Students are grouped by class within grade for each school. This report is for Clark's fourth-grade class at Central Elementary School in Spring Lake.

Individual scores are provided for all students who took the tests, including students identified on the answer folders as Special Education, as having one or more disabilities according to Section 504, or as Limited English Proficient.

One copy of the List of Student Scores with Class Summary is provided for the classroom teacher. A second copy of the report is provided for the school.

- (A) Class, school, system, and norms information is provided. This is a list of students in Clark's fourth-grade class at Central Elementary in Spring Lake.
- (B) Student name and other identifying information are provided on the left side of the report. The information for the first student, Jamie Anderson, shows that Jamie's birth date is September 1993; she took Level 10 of the ITBS; she is a female; her ID number is 0000141452; she was ten years and six months old when she took the test; she took Form A of the ITBS; and she has not been enrolled in the school for the entire year. A key for all codes is provided on page 9.
- (C) The scores reported are standard score (SS), national stanine (NS), normal curve equivalent (NCE), and national percentile rank (NPR). Jamie took all of the tests in the Complete Battery. Her Composite is the single best indicator of Jamie's overall performance on the tests. The Composite SS is the average of the SSs for Reading Total, Language Total, Mathematics Total, Social Studies, Science, and Sources of Information Total. (See page 2 for a listing of scores that are combined to obtain each score.)

Interpretation test. Therefore, James does not have Math Total, Core Total, or Composite scores.

If a degree symbol (°) appears in front of the score for a particular test, it indicates that a portion of the test was taken with a non-standard accommodation, therefore excluding the score from the group averages.

The second student listed, Alicia Brentwood, did not take the ITBS. The Alternate Assessment Scale was administered to Alicia and her scores are reported in columns G through K.

## Report of Group Averages

At the end of the List of Student Scores for each class group, there is a page that displays the average scores for the class. The School Summary of Student Scores and the System Summary of Student Scores are also provided for the MontCAS.

- One copy of the School Summary is provided for the school. A second copy of the report is provided for the system. One copy of the System Summary is provided for the system.
- (D) In this Class Summary of Student Scores for Clark's class, identifying information printed in the top right corner is the same as identifying information printed on each page of the List Report.
- (E) In the box on the left, "Number of Students Included" denotes the number of student scores in obtaining the averages for each test, Total, or Composite. In Reading, for example, scores for 23 students were averaged. The average SS (computed to the nearest tenth) for each test is shown, and then the NS, or national stanine. The national stanine for each test is the stanine of the average SS. Next, the NCE for each test is the NCE of the average SS (to the nearest tenth), and the last score is the NPR for the average SS of each test.

Class averages need to be interpreted as though they were the scores of the average or typical student in the class.

The Number of Students Tested is the number of students who took at least one test.

If a student took a test but answered too few questions to warrant providing a score, a pound sign (#) appears in the score box for that test. For example, the third student listed, James Carter, did not answer enough questions in the Problem Solving and Data



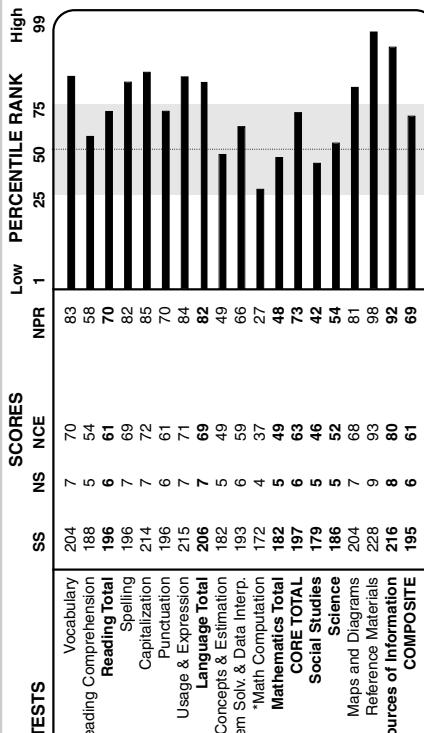
# PERFORMANCE PROFILE FOR JAMIE ANDERSON

## Iowa Tests of Basic Skills® (ITBS®)

**A Component of MontCAS**

Student ID: 0000141452  
 Form/Level: A/10  
 Test Date: 04/01/2000  
 Norms: 04/01/2000  
 Order No.: 002-A7000028-0-002  
 Page: 1 Grade: 4

Student: Anderson, Jamie  
 Class: Clark  
 School: Central Elementary  
 System: Spring Lake  
 State: Montana



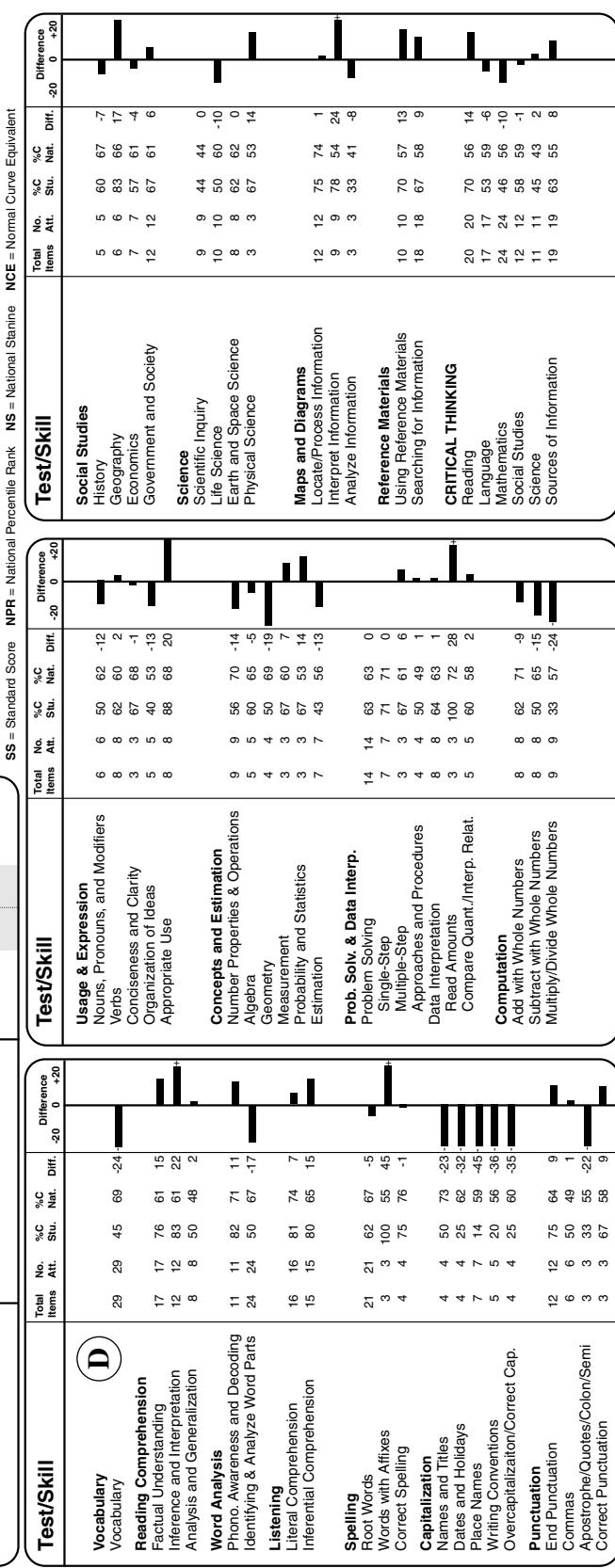
In the upper left part of this report, scores are printed for the tests, totals, and, if available, the composite. Several types of scores are reported, including the national percentile rank (NPR), which is the percent of students in this grade in the nation with a lower score on that test, total, or composite.

(C)

The graph to the right of the scores provides a visual display of the student's performance on each test relative to the other test areas. The NPRs for the various scores are displayed as horizontal bars. The varying lengths of these bars permit identification of the student's stronger and weaker areas of achievement.

The lower part of the report provides detailed information about skills in each test. The number of items for each skill, the number attempted, the percent correct for the student, and the percent correct for students in this grade in the nation are reported. The difference between the student's percent correct and the percent correct for students in the nation is displayed as a horizontal bar. These bars permit identification of skills that stand out as high or low when compared with students in the nation.

\* Math Computation included in Totals or Composite



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A plus (+) or minus (-) sign in the difference graph indicates that the bar extends beyond +/−20. No Attn. = Number Attempted      %C = Percent Correct

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## **Individual Performance Profile**

The Individual Performance Profile report displays test scores on the top and skill scores on the bottom for the test level taken by the student. The report is intended for use by classroom teachers for monitoring student progress, planning instruction for individual students, and for use in conferences with parents about their child's progress in the subject areas tested. One copy of this report is provided for the school.

- Ⓐ The block of information in the upper right-hand corner indicates that this report is for Jamie Anderson, a student in Clark's class at Central Elementary School in the Spring Lake System. Jamie took Level 10 of Form A in April of 2005, and the norms being used to report her scores are interpolated to the week of April 1, 2000.
- Ⓑ The score profile section in the upper left-hand corner lists the tests included in Jamie's profile, and the national percentile ranks she attained are listed in the NPR column and graphed in the area to the right. The NPR indicates the percent of students in the nation with a lower score on that test, total, or composite. The display of NPRs to the right of the scores provides an overview of Jamie's performance in each test area relative to other test areas. The varying lengths of these bars permit easy identification of the stronger and weaker areas of achievement.

Ⓒ To the right of the bar graph display, there is interpretive information about how to use the scores and graphs from the tests. There also are explanatory notes for using the skill information printed at the bottom of the page. Below the interpretive paragraphs is a legend that shows the meanings of the abbreviations used for the scores in the profile section.

- Ⓓ The lower part of the report provides detailed information about skills in each test area. The number of test items for each skill, the number Jamie attempted, her percent correct, and the percent correct for students in the nation are reported. The difference between Jamie's percent-correct score and the percent-correct score for students in the nation is displayed in horizontal bars. The varying direction and lengths of these bars permit easy identification of skills that may represent stronger or weaker areas of performance compared to students in the nation. The "Diff." column is the difference between the percent-correct scores in the previous two columns. Negative values mean Jamie's score is lower than the national average, and positive values mean her score is higher than the national average. The Diff. values are graphed as bars in the area labeled "Difference." When a difference is larger than 20, a plus sign (+) or a minus sign (-) appears at the end of the bar.

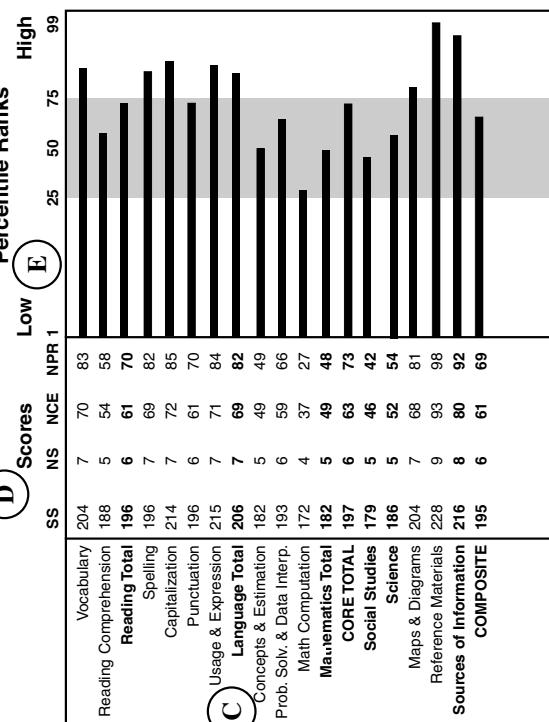


# PROFILE NARRATIVE FOR JAMIE ANDERSON A

Iowa Tests of Basic Skills® (ITBS®)  
A Component of MontCAS

Student ID: 0000141452  
Form/Level: A/10  
Test Date: 04/20/05  
Norms: 04/01/2000  
Order No.: 002-A70000028-0-02  
Page: 1

Student: Anderson, Jamie  
Class: Clark  
School: Central Elementary  
System: Spring Lake  
State: Montana  
**B**



Dear Parent or Guardian:

**F**

Jamie was given the *Iowa Tests of Basic Skills* in April 2005. At the time of testing, she was in fourth grade in Central Elementary in Spring Lake.

Jamie's composite total score is the score that best describes her overall achievement on the tests. Jamie's composite national percentile rank of 69 means that she scored higher than 69 percent of fourth-grade students nationally. Her overall achievement appears to be above average for fourth grade.

A student's ability to read is related to success in many areas of schoolwork. Jamie's Reading Comprehension score is about average when compared with other students in fourth grade nationally.

A student's scores can be compared with each other to determine relative strengths and weaknesses. Vocabulary, Spelling, Capitalization, and Usage & Expression seem to be areas of relative strength for Jamie. Some other strengths might be used to help improve other areas. Compared to Jamie's other areas, Math Concepts & Estimation, Math Computation, and Social Studies may need the most work.

NOTES:

**G**

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Embrace Learning with The Iowa Tests

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## **Student Profile Narrative**

One copy of the Student Profile Narrative is provided for each student. Each report should be reviewed carefully before it is distributed to parents.

- Ⓐ Basic student information is provided here. This is a report for Jamie Anderson in Clark's fourth-grade class.
- Ⓑ Class, school, system, and norms information is provided.
- Ⓒ The tests and totals are listed.
- Ⓓ Scores reported are SS, NS, NCE, and NPR.
- Ⓔ The National Percentile Ranks are plotted with a solid bar.

The narrative explains the test data in terms that are easy to understand. The fourth paragraph of the narrative includes a discussion of relative strengths and weaknesses, which is based on the Composite Total. If the Composite Total is not available, strengths and weaknesses are not discussed.

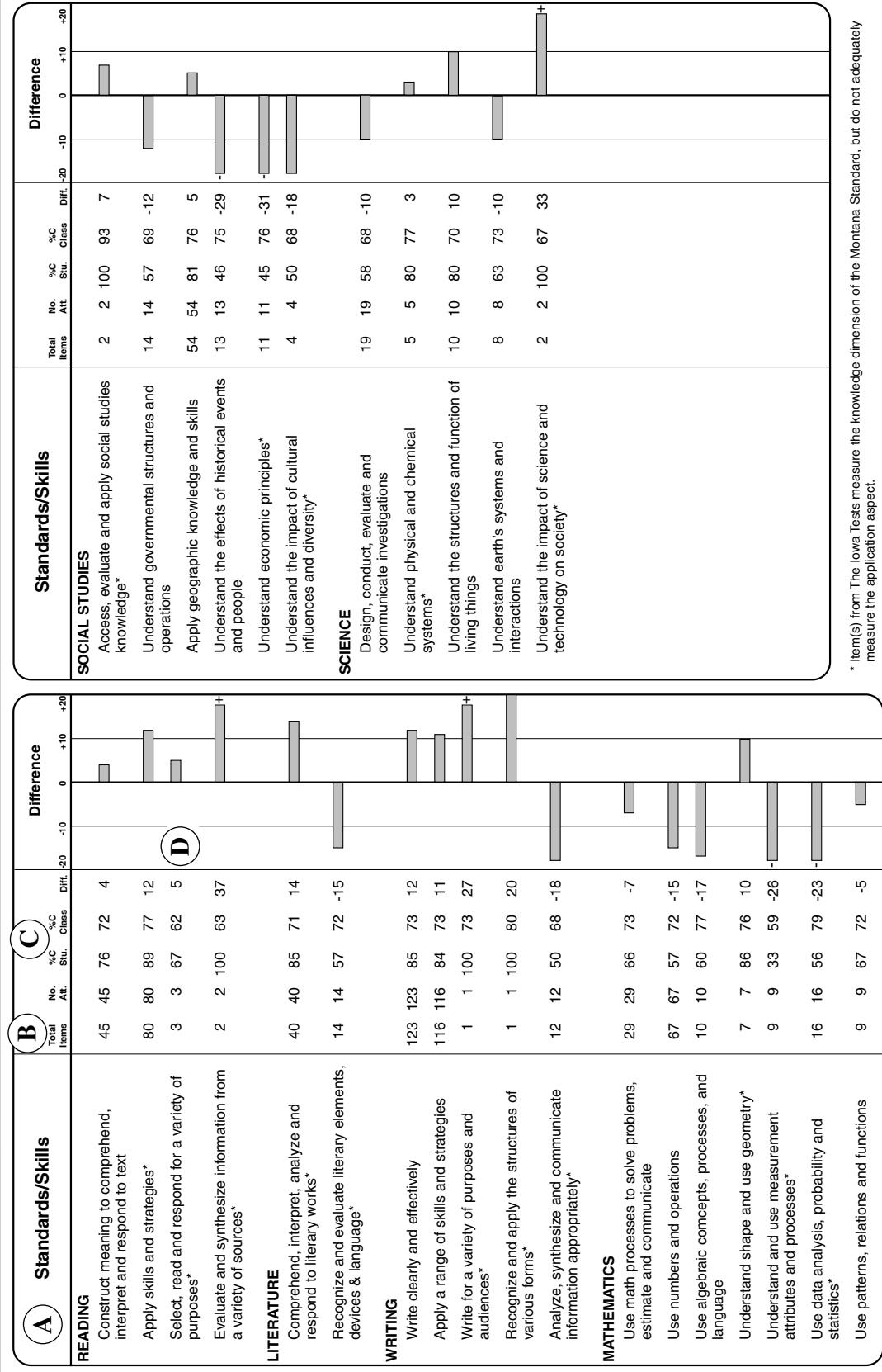
- Ⓕ The narrative often ask questions about the relative strengths and weaknesses noted in this narrative. Just as high-scoring students may have relative weaknesses, low-scoring students may have relative strengths.
- Ⓖ To the left of the narrative is a blank space for school administrators to include a message to parents.

# INDIVIDUAL CUSTOMIZED SKILLS REPORT

## A Component of MontCAS

Student: Anderson, Jamie  
 Class: Clark  
 School: Central Elementary  
 System: Spring Lake

Student ID: 0000141452  
 Form/Level: A/10  
 Test Date: 04/2005  
 Order No.: 002-A70000028-0-02  
 Grade: 4  
 Page: 1



\* item(s) from The Iowa Tests measure the knowledge dimension of the Montana Standard, but do not adequately measure the application aspect.

No Att = Number Attempted

%C = Percent Correct

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## **Individual and Group Customized Skills Report**

This report is intended to help examine the progress of students and groups towards meeting those Montana Standards that are measured by The Iowa Tests. The Iowa Tests were aligned by Montana to the Standards in 2000 at the beginning of the contract with Riverside Publishing.

The Individual Customized Skills Report displays the differences in the percent-correct score between the student and his or her class. One copy of this report is provided for each student.

The Class Customized Skills Report displays the differences in the percent-correct score between the class and the school. Two copies of this report are provided to the school.

The School Customized Skills Report displays the differences in the percent-correct score between the school and the system. One copy of the report is provided to the school and one copy is provided to the system.

The System Customized Skills Report displays the differences in the percent-correct score between the system and the state.

Because this level compares each system against all of the state, it cannot be generated until all systems are received and processed at Riverside Publishing. It is anticipated that one copy of this report will be shipped to each system during the month of May.

- Ⓐ Montana State Content Standards.
- Ⓑ Total number of item(s) from The Iowa Tests that measure the knowledge dimensions of the Montana Standard and the number of items attempted.
- Ⓒ Percent of correct responses per level and the numeric difference between the scores.
- Ⓓ The “Difference” column is the difference between the percents correct in the previous two columns. When a difference is larger than 20, a plus (+) or minus (-) appears at the end of the bar.

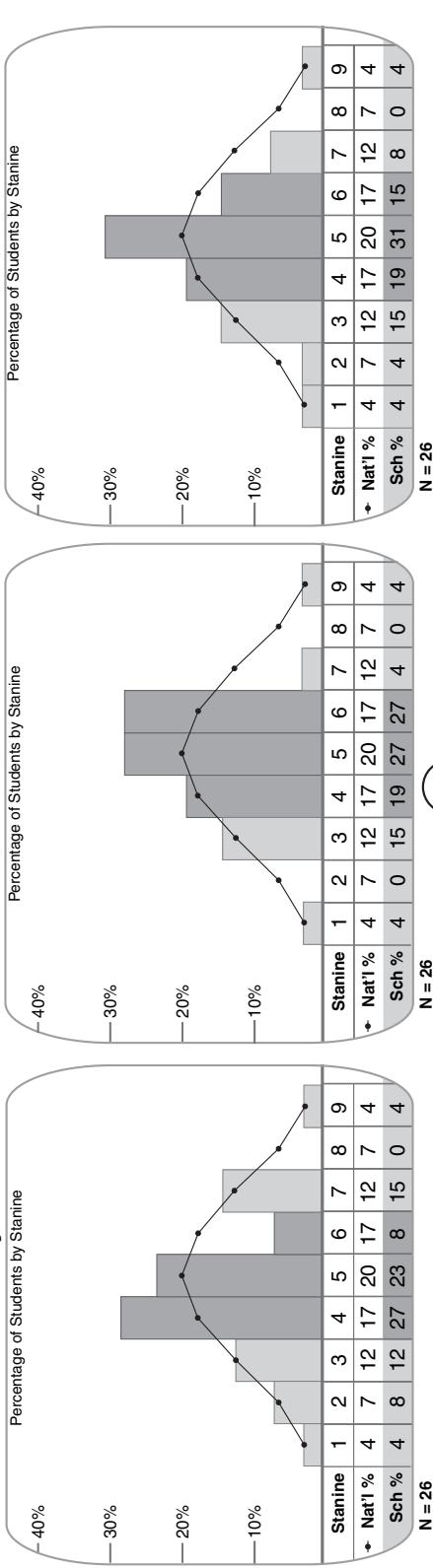


## SCHOOL NARRATIVE SUMMARY Iowa Tests of Basic Skills® (ITBS®)

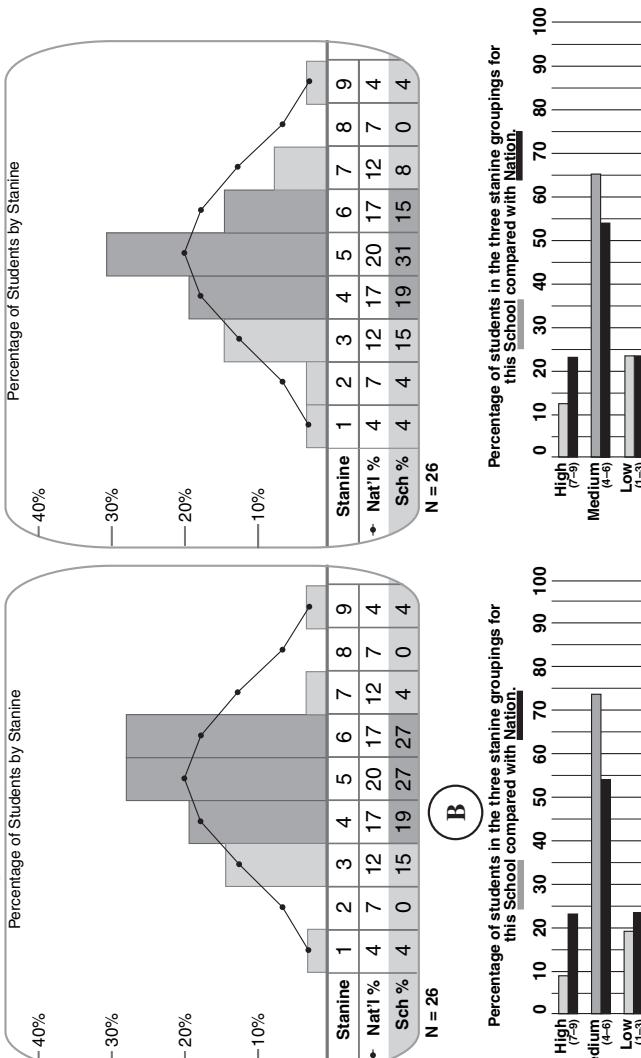
A Component of MontCAS

School: Central Elementary  
System: Spring Lake  
State: Montana  
Form/Level: A/10  
Test Date: 04/20/2005  
Norms: 04/01/2000  
Order Number: 002-A70000028-0-002  
Page: 1 Grade: 4

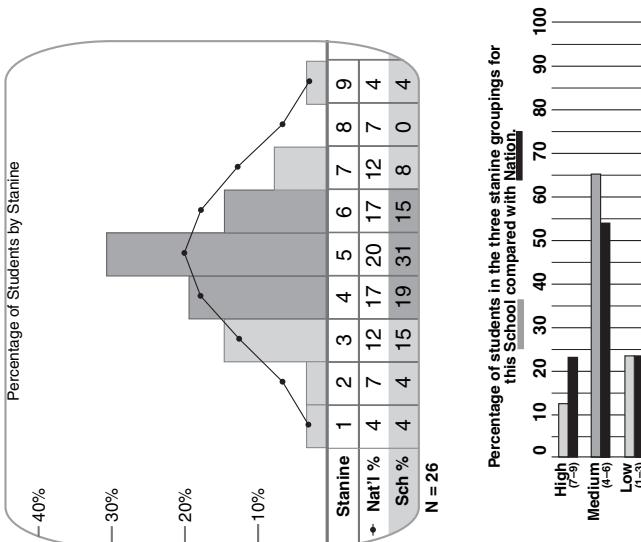
### Vocabulary



### Reading Comprehension



### Reading Total



### VOCABULARY SUMMARY

Compared with students in the nation in this grade, this School has:

- A smaller percentage of high achieving students
- About the same percentage of medium achieving students
- A larger percentage of low achieving students
- About the same percentage of low achieving students

The average Vocabulary standard score for this School, grade 4 was 208.1, which represents a national percentile rank of 44 for this time of the year. The typical student in grade 4 at this School scored higher than 44 percent of grade 4 students in the nation.

(C)

Natl % = National Percentage of Students in Stanine Sch % = School Percentage of Students in Stanine

### READING COMPREHENSION SUMMARY

Compared with students in the nation in this grade, this School has:

- A smaller percentage of high achieving students
- A larger percentage of medium achieving students
- A smaller percentage of low achieving students
- About the same percentage of low achieving students

The average Reading Comprehension standard score for this School, grade 4 was 208.4, which represents a national percentile rank of 44 for this time of the year. The typical student in grade 4 at this School scored higher than 44 percent of grade 4 students in the nation.

(C)

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### READING TOTAL SUMMARY

Compared with students in the nation in this grade, this School has:

- A smaller percentage of high achieving students
- A larger percentage of medium achieving students
- About the same percentage of low achieving students
- About the same percentage of low achieving students

The average Reading Total standard score for this School, grade 4 was 208.3, which represents a national percentile rank of 43 for this time of the year. The typical student in grade 4 at this School scored higher than 43 percent of grade 4 students in the nation.

(C)

*Sample reports are for illustration only and should not be interpreted.*

## Group Narrative Summary

One copy of the School Narrative Summary is provided for the school. A second copy of the report is provided for the system. One copy of the System Narrative Summary is provided for the system.

This is one of the most useful reports for presenting school-level or system-wide test results to groups who are inexperienced at score interpretation. Three key features of the Group Narrative Summary are:

1. A distribution of scores is shown so that attention will not be focused only on average performance. The interpretations deal with high-scoring and low-scoring segments of the grade group, not just the average area.
  2. A graphic describes how performance is distributed and compares local performance with the national norm group. Those who are uneasy about interpreting numerical results are aided by a visual display.
  3. Narrative statements use common language to put the numerical ideas into words that are generally understood by those who are number-shy.
- Ⓐ In the example shown on the previous page, the scores for the fourth grade of Central Elementary in the Spring Lake School System are provided for three *ITBS* scores: Vocabulary, Reading Comprehension, and Reading Total. If this were a system version of the report, the school name would be replaced by the system name throughout, and the scores of students from all schools in the grade shown would be included in the analysis.
- The bell-shaped (normal) curve describes what the frequency distribution of student scores from the national norm group looks like. The bar graphs, representing student scores in the local school (or district), are superimposed on the bell-shaped curve to make the local-national comparison easy to visualize. The horizontal score
- Ⓑ Below each graph, achievement is described as high, medium, and low by combining certain stanine groups. The top three stanines are defined as the “High” group—the highest-scoring 23 percent of students in the national norm group. (These are percentile ranks 77–99.) The “Medium” group, stanines 4, 5, and 6, cover the percentile rank range 24–76. The “Low” group is defined by the bottom three stanines and by percentile ranks 1–23. In the Vocabulary example, 24 percent of the Central Elementary grade 4 students scored in the bottom three stanines, compared to 23 percent of students nationally. In this case, the difference is trivial.
- Ⓒ The narrative provides a verbal description of what the numerical comparisons mean. The last part of the narrative describes grade-group performance using both a standard score and a percentile rank. Note that these latter interpretations are made by referring to how the average student in the grade group performed.

Some schools select boxes from the Group Narrative Summary to make overhead transparencies for presentations to community groups. Others paste selected boxes into written reports for the school board or longitudinal reports that are kept as a reference in the central office.